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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,833	10/18/2000	Takashi Komura	CSC-023	3550

959 7590 05/20/2003

LAHIVE & COCKFIELD  
28 STATE STREET  
BOSTON, MA 02109

EXAMINER
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CHANEY, CAROL DIANE

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 05/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/691,833

Applicant(s)

KOMURA ET AL.

Examiner

Carol Chaney

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

***Claim Rejections - 35 USC § 112***

Claims 9-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants' claim 9 requires "a discharge hole...for supplying said reaction gas." The form and flow of gas at this discharge hole is unclear because the term "discharge" indicates gas flowing away from the hole, while "supplying" connotes gas flowing *towards* the hole.

***Claim Rejections - 35 USC § 102***

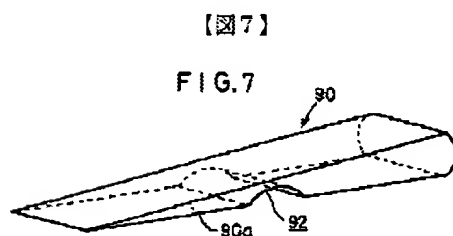
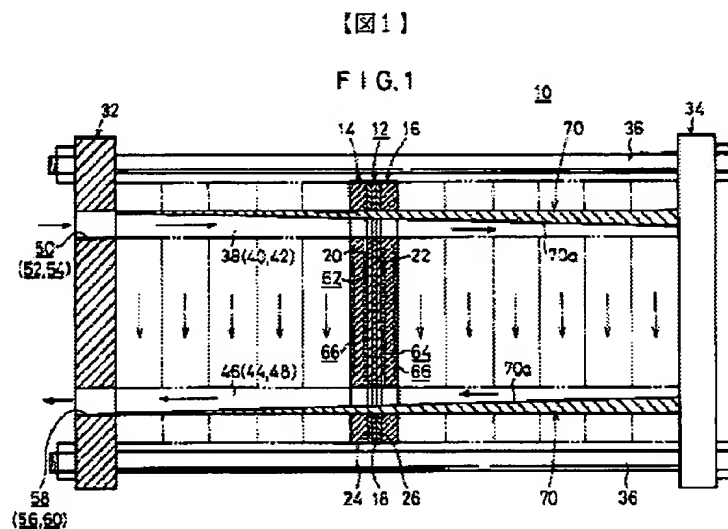
The rejection of claims 9, 10, and 14 under 35 U.S.C. 102(e) as being anticipated by Guthrie et al. is withdrawn in view of applicants remarks filed 12 May 2003. Although Guthrie discloses horizontally-disposed fuel cell stacks, and thus horizontally disposed fuel cells, it does not appear that the gas flow channels (communication holes) penetrate through fuel cell separators.

To the extent to which they are understood, claims 9-11 are rejected under 35 U.S.C. 102(a) as being anticipated by Wariishi et al., JP 2000149977 essentially for reasons of record. The rejection of 24 October 2002 is elaborated below:

Wariishi et al. disclose a horizontally-oriented fuel cell stack. (See Figure 3) As seen in Figure 9, inlet and outlet openings are provided on the same fuel cell stack face

Art Unit: 1745

(reference numeral 32). Pairs of fuel cell stack gas passages ("inlet side communication hole" and "outlet side communication hole") are shown in Wariishi Fig. 1 as the pairs 38, 44 and 40, 46. The communication holes also include the wedge shaped pieces shown in various embodiments by numerals 70, 80, 90 or 130. As seen in Figure 7, this piece provides a discharge hole 92 provided at a deep portion of the outlet side communication holes, and opposite a discharge port.





With regards to claim 11, it is noted that the Wariishi hydrogen gas “inlet side communication hole” (38) and “outlet side communication hole” (44) are connected by means of first passage 62 and the oxidant “inlet side communication hole” (40) and “outlet side communication hole” (46) are connected by means of a second passage 64. First and second passages 62 and 64 can be considered communication passages or by-pass passages, since both are passages by which excess gas from a given fuel cell in the stack is allowed to bypass that cell.

### ***Response to Arguments***

Applicant's arguments filed 12 March 2003 have been fully considered but they are not fully persuasive. Applicants assert Wariishi et al. do not disclose a "discharge hole". However, as explained above, Wariishi et al. disclose a discharge hole at a point upstream of the gas discharge port. It is noted that applicants' claims do not require the discharge hole to be at a fuel cell end plate. With regards to claim 11, applicants assert Wariishi et al. do not disclose a bypass flow passage. As noted by the applicants, the *end plate* disclosed by Wariishi et al. does not necessarily include bypass flow passages. However, applicants claim does not require the bypass flow passages to be located in an end plate. As discussed above, Wariishi et al. disclose a plurality of bypass flow passages, although not necessarily in the fuel cell stack end plate.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


Art Unit: 1745

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol Chaney whose telephone number is (703) 305-3777. The examiner can normally be reached on Mon - Fri 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 703-308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Carol Chaney  
Primary Examiner  
Art Unit 1745

cc  
May 17, 2003